

Academic Year 2020-2021 Newsletter

What has the Developing Minds Lab been up to?

We've been very busy this year at Boston University's Developing Minds Lab! While our physical lab space has been closed since March 2020 due to COVID-19, we have moved many of our studies online and have virtually connected with the Boston community and beyond! We also have presented our work at virtual conferences and have some new publications. We could not have accomplished so much without your help!



Welcoming our new graduate student...



Esra Nur Küçük is interested in children's conceptual development, including how children understand what is possible. Esra completed her BA at Istanbul Sehir University, in Turkey. She is also a Turkish Fulbright grantee. Welcome, Esra!

..and saying goodbye to our postdoctoral fellow!

DML postdoc Dr. Tashauna Blankenship has started a new position as Assistant Professor of Psychology at the University of Massachusetts, Boston. Congratulations, Tashauna!



What's new at the DML?

In our 'Music Box' study we're investigating whether children can use numerical reasoning to understand causal events. 4-6-year-old's are first introduced to a music machine that plays a song when a specific number of objects are placed on top. Children then solve problems in which



they have to figure out how many objects must be on top of the box to get it to play music. This will help us understand how children reason about numbers.

Developing Minds Lab on the (Virtual) Road!

Even though COVID-19 has made it impossible to attend conferences in person, we have been able to virtually travel the globe presenting our work in online formats! We attended the Vision Sciences



Society Annual Meeting, the International Conference on Infant Studies, the Budapest CEU Conference on Cognitive Development, and the Society for Research in Child Development Biennial meeting. Graduate students Jessica Applin and Praveen Kenderla, postdocs Tashauna Blankenship and Chen Cheng, and undergraduate Honors student Shiba Esfand all presented their work.

Hot off the Press!

You may remember your child participating in our "Feed the Animals" study looking at children's abilities to track and remember multiple objects. We found that children's capacity to pay attention to multiple objects increases significantly around middle childhood. These findings have recently been published in <u>Developmental</u> <u>Psychology</u> which you can check out here: http://www.bu_edu/cdl/files/2020/08/2020-BlankenshipStrongKibbe-DevPsych.pdf Additionally, your child may have participated in our "Meta Beads" study looking at children's ability to assess the accuracy of their memories when keeping track of multiple objects. We found that children were able to gauge the accuracy of their memories: children bet more when their memories were accurate and less when they were inaccurate. Our findings have been published in the *Journal of Experimental Psychology: Learning, Memory, and* Psychology: http://www.bu.edu/cdl/files/2020/11/2020-ApplinKibbe-

JEPLMC.pdf

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Can kids keep track of things they haven't seen? Do you remember our Shell Game study looking at children's working memory? We recently started an extension of this study investigating whether 4-to-8 year olds are able to use disjunctive reasoning when tracking multiple objects. Children play a 'hide-andseek' game where they see different animals hide

Children make the most of their time!

Imagine you are waiting for the bus to go to work. The bus was supposed to arrive at a certain time, but it's late. How long do you wait before you decide to just call a cab? Adults make these kinds of calculations all the time, weighing the costs and benefits of waiting for a possible future outcome. In a recent study, children played a game in which they helped a character collect treats for a party. Sometimes the treats would appear immediately, but sometimes they would take a long time to appear. Kids

could choose to wait or move on to try to collect more treats. We found that children as young as 5 make strategic decisions about when to wait and when to move on, just like adults do!



Thank you for all your support!

Thank you so much for making all of this research possible! We hope to welcome your family back into the lab soon, but for now, you can participate with us online! If you or anyone you know is interested in participating, you can learn more about our lab on our website: www.bu.edu/cdl/developing-minds-lab/

Or fill out our participant sign up form:

http://www.bu.edu/cdl/developingminds-lab/for-parents/developingminds-labfor-parentsparticipantsign-up/

Don't forget to check us out on our Facebook page for updates! <u>https://www.facebook.com/Develo</u> <u>pingMindsLabBU/</u> <u>https://twitter.com/BUDevMindsL</u> and move around on the screen. Some of the animals are initially hidden from children's view, so children have to keep track of the known animals in order to find the unknown animal!



Can babies do algebra?



Adults can solve a problem like 5+x=12 by manipulating the symbols in the equation. In previous work, we found that kids could solve algebra-like problems when they were presented non-

symbolically, with sets of objects and a cup that stood in for the x variable. In new work, we are asking whether babies can do this as well! Infants watch a video of a cup adding objects behind a screen, and then we lift the screen to reveal the objects behind it. We measure how much infants look at the video as a measure of their expectations about what the cup added.



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